Please amend the claims as shown in the List of Claims as follows.

List of Claims

1. (Currently amended) A transgenic Dunaliella Salina bioreactor comprising:
~~a~~ Dunaliella Salina as host,
transformed with a foreign target gene selected from the group consisting of tumor necrosis factor (TNF) and hepatitis B surface antigen (HBsAg); and a selectable marker selected from the group consisting of the aadA gene encoding for spectinomycin or streptomycin resistance, and BAR gene encoding for herbicide phosphinothricin (PPT) resistance.

2. (Cancel)

3. (Cancel)

4. (Cancel)

5. (Cancel)

6. (Currently amended) A method for preparing ~~the~~ a transgenic Dunaliella Salina bioreactor, ~~further comprises~~ comprising the following steps:

(a) ~~introducing foreign target genes into~~ transforming the cells of Dunaliella Salina by introducing into the cells of Dunaliella Salina an expression vector comprising a foreign target gene selected from the group consisting tumor necrosis factor gene and hepatitis surface antigen gene; ~~using the transformation techniques.~~ together with a selectable marker selected from the group consisting of aadA gene encoding for spectinomycin or streptomycin resistance, BAR gene encoding for herbicide phosphinothricin (PPT) resistance; and

(b) screening ~~transformed~~ the cells of Dunaliella Salina for expression of the selectable marker showing transformation.

7. (Currently amended) A method as claimed in step (a) of claim 6, wherein ~~said transformation techniques are one or more of the methods for genetic transformation~~ the cells of Dunaliella Salina were transformed by a method selected from the group consisting of ~~biological,~~ a physical and~~/or~~ a chemical methods.

8. (Cancel)

9. (Currently amended) ~~A~~ The method ~~as claimed in~~ according to claim 7, wherein said physical method is selected from the group consisting of electroporation, use of a gene gun and wherein said ~~and~~ chemical methods ~~can be one or more of~~ is selected from the group consisting of PEG-mediated transformation. ~~, liposome, electroporation, ultrasonic delivery, gene gun, microinjection, ultraviolet laser microbeam, glass bead agitation and aerosol gene delivery~~.

10. (Cancel)

11. (Cancel)

12. (New) The method according to claim 6 wherein the transformation is by construction of a Dunaliella Salina expression vector containing a foreign target gene selected from the group consisting of a fragment of TNF gene and HBsAg gene and transforming the cells of Dunaliella Salina with the Dunaliella Salina expression vector

13. (New) The method according to claim 12, wherein the Dunaliella Salina expression vector is constructed by the steps:

    (a) cloning the Dunaliella Salina chloroplast atpA 5' promoter sequence and rbcL 3' terminator sequence;

    (b) constructing a plasmid pUC19-TNF containing a cDNA fragment of TNF;

(c) digesting the plasmid pUC19-TNF with a restriction endonuclease to provide an intermediate vector pSK-atpK-TNF for an expression cassette of the TNF cDNA fragment;

(d) Constructing a vector p64C containing a cloned homologous fragment of the Dunaliella Salina chloroplast gene, clpP-trnI-petB, together with a chlL gene encoding the 5' promoter and the 3' terminator of the chlL gene;

(e) Inserting the expression cassette of TNF cDNA fragment into the p64C vector to provide an intermediate chloroplast expression vector, p64C-atpX-TNF;

(f) Locating the expression cassette of TNF cDNA fragment downstream of the chlL 5' promoter;

(g) Constructing an expression cassette of aadA gene encoding for spectinomycin resistance; and

(h) Constructing a chloroplast expression vector comprising the expression cassette of TNF cDNA fragment and the expression cassette of aadA gene.

14. (New) The method according to claim 12 wherein the target gene is HBsAg comprising the steps:

(a) amplifying a gene fragment comprising the fusion of a fragment encoding amino acid residues 1-226 of HBsAg and a PreS1 gene fragment encoding amino acid residues 20-48 of PreS1 of hepatitis B viral gene and ligating the fusion gene at Sal I/SphI site to obtain SS1 fusion gene;

(b) Constructing a plasmid, pUC18-CtxB-SS1, comprising CtxB gene of cholera toxin B subunit gene and the SS1 fusion gene;

(c) cloning the 5' promoter and the T-Nos terminator of a heat shock protein, Hsp70B of Dunaliella Salina to obtain plasmid pSP72-Hsp-Nos;

(d) Ligating the pUC18-CtxB-SS1 into plasmid pSP72-Hsp-Nos between the 5' promoter and the T-Nos terminator sequences to obtain an expression cassette of CtxB-SS1;

(e) Constructing an expression cassette expressing nitrate reductase (Nit1) and inserting it into an expression cassette comprising MAR1 and MAR2 of the matrix attachment regions of a Dunaliella Salina expression vector PCAMBRIA-OS1644 in the same orientation;

(f) Constructing a BAR expression cassette expressing BAR encoding for PPT resistance;

(g) Integrating the expression cassettes, Nit1, CtxB-SS1 and BAR to an active transcription region of Dunaliella Salina chromosome.